

Assessing the Science of Cell Phone Safety, with David Savitz

Cell phones have become an integral part of many people's lives. But could our constant contact with these devices be affecting our health? That question has been the subject of international debate and intense study in recent years. In this podcast, David Savitz of Brown University discusses evidence from epidemiologic studies of cell phone safety with host Ashley Ahearn.

Ashley Ahearn

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AHEARN: It's *The Researcher's Perspective*. I'm Ashley Ahearn.

Most of us have them tucked into our back pockets, charging in our cars, tumbling around in our purses. They help us connect and plan our social lives. They wake us up in the morning. They entertain us in our spare time.

There's no denying that cell phones have become an integral part of people's lives. But could our constant contact with these devices be affecting our health?

That question has been a subject of international debate and intense study in recent years. So, we're calling on David Savitz to help shed some light on the issue.

Dr. Savitz is a professor at Brown University and co-author of a commentary in *EHP* titled "Mobile Phones, Brain Tumors and the Interphone Study: Where Are We Now?"

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Dr. Savitz, thanks for joining me.

SAVITZ: You're welcome.

AHEARN: Let's get right to it: Where are we now? Are cell phones affecting human health?

SAVITZ: I think that, without downplaying the uncertainties that remain, I actually am among those who believe that we can be increasingly confident that they're not likely at least to be affecting brain tumors, which has been the main health outcome of concern. I think scientifically there is basis for speculation. There is a legitimate, simple, intuitive reason to be concerned about this exposure that humans in their history have never experienced something quite like this before, and even though we believe it to be without harm, it's a fair question: could we be wrong? Could we be missing something important here that would be of disastrous consequence if we get this wrong?

AHEARN: That leads me to my next question: Basically, cell phones really only started to become widely used about a decade ago, and I'm wondering if that's enough time to see any widespread effects in the population.

SAVITZ: Well, that's one of the big concerns. No matter how good the research is, all we can study is the experiences we've had. And so to ask the question, what about exposure for 20 years or 30 years? The answer has to be, of course, we don't know. It's a speculation about whether there would be something discovered later on. The only thing I would say is there's an appreciation that a number of agents that cause cancer don't do so immediately, and that includes smoking and asbestos and ionizing radiation, you know, X-rays and so on, but in every one of those cases within about 10 years of exposure we would be at least beginning to see that there was an increased risk there.

The fact that there is, at least in my view, nothing detectable thus far is certainly reassuring. It is not definitive. I think that there's every reason to suggest that we continue to be vigilant and to do the research that's needed every 5 or 10 years to sort of update that information. But I think, you know, it is fair to say "so far, so good."

AHEARN: Can you give me a sense for how much research is being conducted on cell phones and their potential health impact?

SAVITZ: Well, you know, there certainly is a fair amount of work that's been done in laboratory studies, both basic mechanisms of how these kinds of fields affect biologic tissues and then more classic toxicology seeing whether these kinds of fields have effects on laboratory animals. I'm not as familiar, overall, with that direction of the research.

In terms of the epidemiology, there have been a handful of major studies done, perhaps a dozen or so. The most recent and the largest and, in my view, probably the most sophisticated thus far was the Interphone study that generated quite a bit of controversy. There continue to be, you know, analyses and work done that sort of follows from that. I am not aware right now of any other major epidemiologic studies that are in progress, although I am sure that before too long other ones are likely to begin.

AHEARN: In May of 2011 the International Agency for Research on Cancer classified cell phone radiation as a "possible human carcinogen."

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Can you tell me, how did they come to that decision?

SAVITZ: There's a process when the International Agency for Research on Cancer evaluates these agents, and they appoint a committee that, like any committee, is made up of individuals with individual views. And there's no certainty that another group of equally qualified scientists would come to the same answer, but in this group's judgment the evidence reached the threshold for classifying this exposure as possibly carcinogenic. It's important to note that the threshold is not terribly high for reaching that conclusion. The evidence for "possible carcinogen," as has been noted by others, it includes things like coffee, for example; caffeine has been elevated to that level. So the word "possible" in that committee's view means literally that: unproven, but it's possible.

From what I know—I was not part of the deliberation process, and perhaps my views would have changed in the course of that—but through a group that I've been working with that published the recent commentary in *Environmental Health Perspectives*, we've looked at that. And at least in my view—I have to speak for myself on this, not

necessarily that of my colleagues—I would find it very unlikely that I would have been persuaded, given the evidence I’ve seen.

I don’t want to negate the fact that there is some evidence that might point in that direction, but at least in my view, in balance, it is in fact suggestive of the absence of a measurable increase in risk.

AHEARN: I’m curious about the funding here. Have you come across any potential conflicts of interest in your review of the research out there on this subject?

SAVITZ: It’s interesting, and I’m not an expert on the subtleties of how the money flows and where it comes from and so on. I certainly can say that this is not one of those areas that, in looking back at some of the, if you will, the bad old days of the tobacco research or really the petrochemical industry at different phases, other industries—at times there’s been a very heavy-handed and aggressive campaign to exonerate their product—I certainly don’t see this as falling into that category. Some people would argue that there’s a subtle slanting or maybe even, some argue, not so subtle.

In my view, if there is a spin or a slanting that’s going on, it’s not so obvious, at least to me, as somebody involved in the area. Studies like the Interphone study have a variety of funding sources, but they’re done by competent scientists in the most objective ways. And really in looking at the research itself, I mean, that’s where the bottom line is: Is there something that is tainting the research? Is there some way that investigators are being co-opted or doing the bidding of the industry? And I really, I have not seen any signs of that.

AHEARN: Dr. Savitz, do you have a cell phone?

SAVITZ: Yes.

AHEARN: And how do you use your cell phone?

SAVITZ: I don't really like using the phone period that much, land line or cell phone, but I use it as needed without much misgiving. When I think about the decision making about that for me personally, I'm not even sure, to be honest, that the health issues are even on the list of considerations. I don't always like the sound quality. I can't always hear. I try to be a little bit conscious about bothering other people around me.

I think it's a practical issue of how many things you can attend to that are of health concern, and I think that if you set the threshold so low as to say that this one is of concern, just imagine if you started looking into the research on diet or on other sorts of behaviors, other decisions we make day to day. If you're going to react to every remote suggestion, it seems that there's a real danger of overload, and what I fear is a sort of fatalism that says, "Gee, everything's bad for you. Maybe they weren't telling me the truth about tobacco either, and maybe I don't really don't need to wear my seatbelt, and maybe it's ok to be obese," and so on. And I know it sounds silly to people who are knowledgeable about health, but try to think about this from the very general public's point of view and if truly if you're panicking over everything, it makes it harder to distinguish what is real and important and worth a lot of effort and investment, like controlling obesity or like eliminating tobacco. If it starts to get in the blur of things like cell phones and charcoal-broiled foods and on and on, I think there's a danger, at least in terms of the public message, of distracting from the important things and focusing on things that really are just not at a level where I think public health benefit can be achieved by further publicizing them. But I actually think that periodically it's worth revisiting the issue in more detailed studies to basically make sure that the reassuring evidence isn't wrong. That's the way I would put it. It's not that we have a high suspicion that there is a problem emerging there—some people do, but I think most scientists do not believe that's likely. And yet at the same time we have been wrong before, and if there's a problem that emerges in 20 years, we sure want to find it and find it as quickly as we can.

AHEARN: Dr. Savitz, thanks so much.

SAVITZ: You're welcome.

AHEARN: Dr. David Savitz is a professor at Brown University in the Community Health and Obstetrics and Gynecology Program. And that's *The Researcher's Perspective*. I'm Ashley Ahearn. Thanks for downloading!

References

¹ Swerdlow AJ, et al. Mobile phones, brain tumors, and the Interphone study: where are we now? *Environ Health Perspect* 119(11):1534–1538 (2011); <http://dx.doi.org/10.1289/ehp.1103693>.

² IARC. IARC Classifies Radiofrequency Electromagnetic Fields as Possibly Carcinogenic to Humans [press release]. Lyon, France:International Agency for Research on Cancer (31 May 2011). Available: <http://tinyurl.com/3sya7sy> [accessed 13 Oct 2011].

Ashley Ahearn, host of *The Researcher's Perspective*, has been a producer and reporter for National Public Radio and an Annenberg Fellow at the University of Southern California specializing in science journalism.